

*COBRA*

# Work Order ID 52344

September 22, 2009 10:16:11 AM



Item ID: D3417-5

Revision ID: D

Item Name: Washer

Start Date: 09/22/2009 Start Qty: 60.00

Required Date: 09/25/2009 Req'd Qty: 60.00

Reference:

Approvals: Process Plan: *MF* Date: *09-09-22* Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_



Setup Start



Stop



Cust Item ID:

Customer:

Run Start



Stop



| Sequence ID/<br>Work Center ID | Operation<br>Description   | Set Up/<br>Run Hours | Draw<br>Number | Draw<br>Rev. | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp                      |
|--------------------------------|--|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|-------------------------------------|
| Draw Nbr                       | Revision Nbr   |                      |                |              |              |               |               |                  |                                     |
| D3417                          | Rev E  |                      |                |              |              |               |               |                  |                                     |
| 100                            | Hardinge CNC LATHE SMALL   | 0.00                 |                |              |              |               |               |                  |                                     |
|                                | Doosan   | 0.00                 |                |              |              |               |               |                  |                                     |
| Doosan Lathe                   | Memo<br>1-Turn as per Folio FA761<br>Rev: <i>MF</i> &<br>Dwg D3417 Rev: <i>D</i><br>2-Deburr |                      |                |              |              |               |               |                  | <i>09.09.22</i>                     |
| 110                            | QC2- Inspect parts off machine FAI/FAIB  | 0.00                 |                |              |              |               |               |                  |                                     |
|                                | QC   | 0.00                 |                |              |              |               |               |                  |                                     |
| Quality Control                | Memo   |                      |                |              |              |               |               |                  | <i>09.09.22</i> <i>(100)</i>        |
| 120                            | QC8- Inspect parts - second check  | 0.00                 |                |              |              |               |               |                  |                                     |
|                                | QC   | 0.00                 |                |              |              |               |               |                  |                                     |
| Quality Control                | Memo   |                      |                |              |              |               |               |                  | <i>09/09/23</i> <i>100</i> <i>Ø</i> |

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 52344

September 22, 2009 10:16:11 AM



Page 2

Item ID: D3417-5

Accept



Setup Start



Revision ID: D

Stop



Item Name: Washer

Start Date: 09/22/2009 Start Qty: 60.00



Cust Item ID:

Required Date: 09/25/2009 Req'd Qty: 60.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

Identify as per dwg & Stock Location: 90

0.00



Packaging

Memo

0.00

Packaging

9/9/24 1050 SP

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/09/25 HJ  
MF 09-09-25

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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|      |      |                    |    |      |     |                                     |                          |

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Picklist Print

September 22, 2009 10:16:10 AM

Page 1

Work Order ID: 52344



Parent Item: D3417-5RevD



Parent Item Name: Washer



Start Date: 09/22/2009

Required Date: 09/25/2009

Comments:

Start Qty: 60.00

Required Qty: 60.00

| Component Item ID/<br>Item Name  | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Remaining<br>Qty To Pick  | Qty<br>Issued | Date<br>Issued | Status |
|--|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|---|---------------|----------------|--------|
| MDELNR1.2500   |                        | Purchased     | No          |                     |                  | 110             | f                  | 19.8200        | 1.8695  |               |                |        |
|  |                        |               |             |                     |                  |                 |                    |                |  |               |                |        |
| DELRIN ROUND BAR 1.25"   |                        |               |             |                     |                  |                 |                    |                |   |               |                |        |

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT

19.82

110256 ✓

19.82

*Per 09.22*

3.61

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
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|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

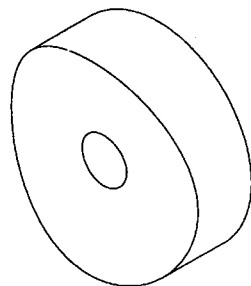
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

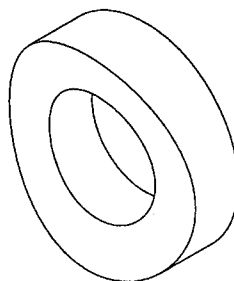
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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

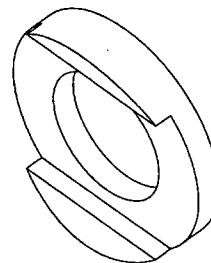




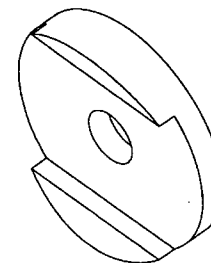
**D3417-1 WASHER**



**D3417-3 WASHER**



**D3417-5 WASHER**



**D3417-7 WASHER**

#52844

RELEASED  
2/6/15

**NOTES:**

- 1) MATERIAL: BLACK DELRIN II 150E OR ACETRON GP ACETAL, ROD  
REF DART SPEC M-DELIN-R  
OR BLACK DELRIN II 150E OR ACETRON GP ACETAL, BAR  
REF DART SPEC M-DELIN-B  
OR BLACK DELRIN II 150E OR ACETRON GP ACETAL, SHEET  
REF DART SPEC M-DELIN-S
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D3417-1, 0.02 lbs  
D3417-3, 0.01 lbs  
D3417-5, 0.01 lbs  
D3417-7, 0.01 lbs

| E          | ADD D3417-7 (ZN A2-2)  | RF  | 09.06.30     |
|------------|--|---|--------------|
| D          | ADD -5 WASHER (ZN B2-1, B2-2); REFORMAT TO "B" SIZE & UPDATE TO CURRENT STANDARDS.<br>REASON: INSTALLATION OF NEW TOW RING | AJS   | 08.07.08     |
| C          | REMOVE CBORE, WIDEN  | PH  | 05.06.30     |
| B          | CHANGE TO ROUND WASHER   | PH  | 05.06.10     |
| A          | NEW ISSUE  | PH  | 05.03.31     |
| REV.       | DESCRIPTION  | BY  | DATE         |
| DESIGN     | AJS  | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA  |              |
| DRAWN      | RF   |   |              |
| CHECKED    |  | DRAWING NO.   | REV. D       |
| MFG. APPR. |  | D3417   | SHEET 1 OF 2 |
| APPROVED   |  | TITLE   | SCALE        |
| DE APPR.   |  | WASHER  | NTS          |
| DATE       | 09.06.30   | <small>COPYRIGHT © 2005 BY DART AEROSPACE LTD<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> |              |

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|      |      |                    |    |      |     |                                     |                          |

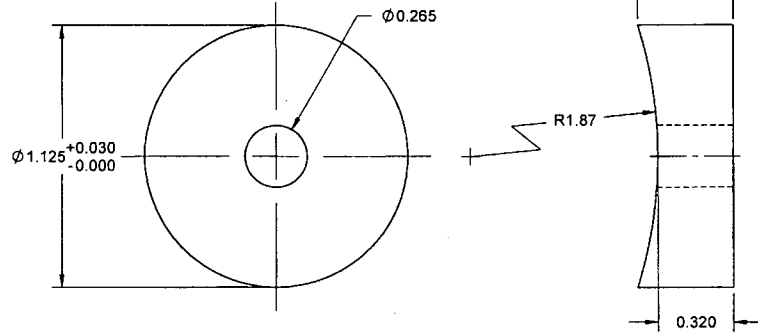
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

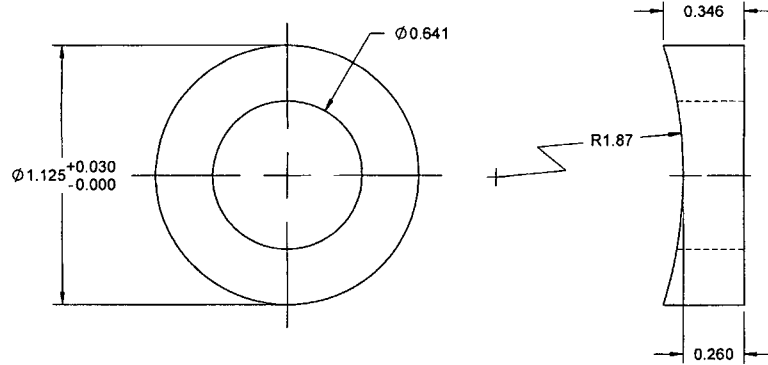
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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

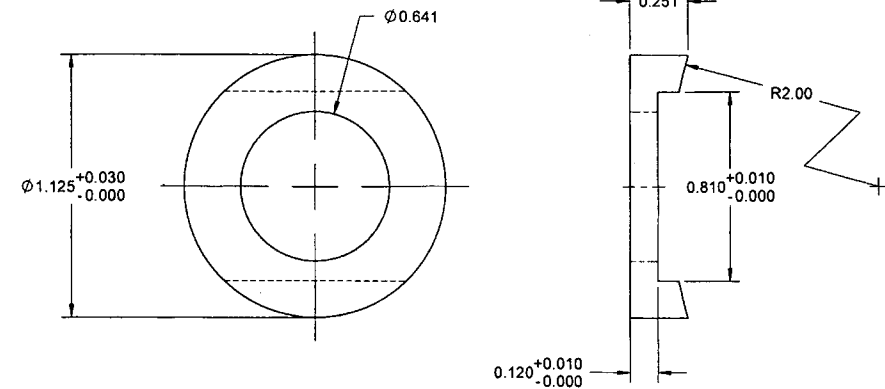
# 52344



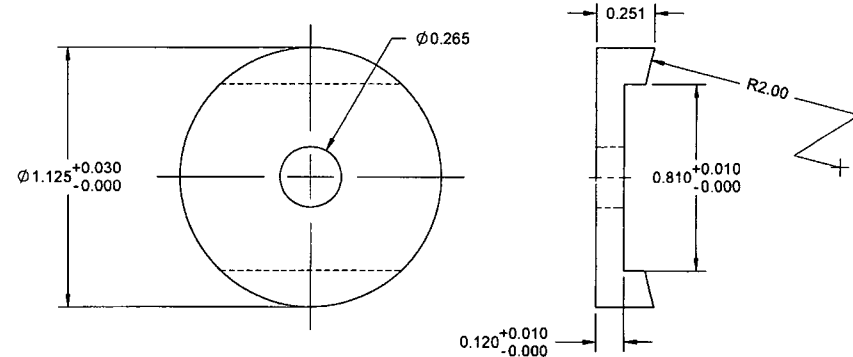
**D3417-1 WASHER**



**D3417-3 WASHER**



**D3417-5 WASHER**



**D3417-7 WASHER**

**RELEASED**  
20/11/15

|            |          |  |              |
|------------|----------|--|--------------|
| DESIGN     | AJS      | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA   |              |
| DRAWN      | RF       |  |              |
| CHECKED    |          | DRAWING NO.  | REV. D       |
| MFG. APPR. |          | <b>D3417</b>   | SHEET 2 OF 2 |
| APPROVED   |          | TITLE  | SCALE        |
| DE APPR.   |          | <b>WASHER</b>  | NTS          |
| DATE       | 09.06.30 | COPYRIGHT © 2005 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br>WRITTEN PERMISSION FROM DART AEROSPACE LTD. |              |

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|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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